DEPARTMENT OF THE INTERIOR Franklin K. Lane, Secretary

UNITED STATES GEOLOGICAL SURVEY George Otis Smith, Director

GEMS AND PRECIOUS STONES

IN 1917 with hish of Gen hames

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GEMS AND PRECIOUS STONES.

By Waldemar T. Schaller.¹

PRODUCTION.

The value of the precious stones produced in 1917 (\$131,012) is much smaller than that for either of the two preceding years and is only a little larger than that for 1914 (\$124,651). In fact, except for 1914, the value for 1917 is smaller than that for any other year since 1897, when it was \$130,675.

Value of precious stones produced in the United States, 1913-1917.

	1913	1914	1915	1916	1917
Beryl. Copper ore gems. Corundum. Diamond Feldspar Garnet Hematite Jade. Opal. Peridot. Pyrite. Quartz. Rhodonite. Smithsonite Spodumene Thomsonite Tropaz. Tourmaline Turquoise Variscite. Vesuvianite Miscellaneous gems.	2,350 238,835 6,315 1,285 4,285 50 15,130 375 50 18,861 165 50 6,520 7,630 8,075 6,105	\$2,395 1,280 61,032 765 449 1,760 300 1,114 100 18,838 1,050 50 21 1,280 7,980 13,370 5,055 1,425 2,287	\$1,675 1,120 88,214 608 368 4,523 1266 (a) 1,985 (a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	\$2,031 1,713 99,180 2,680 305 1,542 (a') 	\$2, 178 2, 857 54, 204 4, 175 (a) 624 (a) 805 (a) 28, 273 (a)

a Small production included under "miscellaneous gems."
b Includes apatite, calamine, chloarstrolite, crocidolite, datolite, fossil coral, Iceland spar, kyanite, lazurite, obsidian, peridot, phenacite, rutile, smithsonite, spodumene (kunzite), staurolite, thomsonite, titanite, and zircon.
c Includes chlorastrolite, datolite, epidote, fossil coral, hematite, kyanite, lazulite, rhodonite, rutile, sepiolite, serpentine, spodumene, staurolite, and vesuvianite.
d Includes andalusite, chlorastrolite, datolite, epidote, feldspar, fossil coral, hematite, Iceland spar, lapis lazuli, obsidian, peridot, phenacite, pyrite, rhodonite, rutile, sepiolite, smithsonite, spodumene, staurolite, thomsonite, willemite, and zoisite.

The value given in the table largely represents the value of the rough material; the value of the cut and polished gems is several times greater. The completeness and accuracy of the statistics of production depend on the assistance rendered by the gem miners and dealers, and their help is greatly appreciated. The Geological Survey carries on a large correspondence concerning precious stones, and

 $^{^1\}mathrm{The}$ table giving statistics of the value of the gems and precious stones produced in 1917 was compiled by Miss Blanche H. Stoddard.

the accurate information furnished by the individual producers enables the Survey to put intending purchasers of rough material

directly in touch with them.

The principal precious stones produced in the United States during recent years are corundum, quartz, tourmaline, and turquoise. These four minerals yielded 83 per cent of the total value of precious stones produced in 1917—corundum was 41 per cent, quartz 22 per cent,

turquoise 11 per cent, and tourmaline 9 per cent.

Montana continues to lead all other States in the value of precious stones produced, corundum being the chief gem mineral, others being moss agate and other quartz gems, Iceland spar, and garnet.

Nevada ranks second, with turquoise and moss agate as the leading precious stones produced. Other gem minerals mined are quartz

and variscite.

California ranks third, with quartz, vesuvianite, tourmaline, and beryl as the chief gem minerals produced. Smaller quantities of andalusite, diamond, epidote, obsidian, opal, rhodonite, spodumene,

topaz, turquoise, and pyrite were also mined.

Maine produced chiefly tourmaline, but also some beryl and quartz; Colorado produced turquoise, quartz, beryl, feldspar, opal, phenacite, topaz, and garnet; Arizona produced copper-ore gems, quartz, garnet, peridot, obsidian, quartz, and tourmaline; Arkansas, diamond, quartz, and smithsonite.

The rank of States in value of precious stones produced is as

follows:

Value of precious stones produced in 1917, by States.

Nevada	17,851	Arkansas Oregon Other States ¹	3, 355
Maine	10,870	-	
Colorado	7, 205		131, 012
Arizona	6.819		

IMPORTS.

The precious stones (excluding pearls) imported into the United States in 1917, as reported by the Bureau of Foreign and Domestic Commerce, were valued at \$34,846,351. Pearls are omitted from the total value, as they are lustrous calcareous concretions with animal membrane between successive layers and are not a mineral but an animal product, being deposited in the shells of various mollusks. As pearls owe their beauty and value to the organic part of their composition, they do not come within the scope of this report. They are, however, among the most desired of gems, and their value is therefore given in a separate column in the table of imports.

The value of imported gems in 1917 was lower than in 1916, higher than in either 1915 or 1914, but lower than for any year from 1909 to 1913. The full recovery in the value of imported gem stones in 1916, as compared with the average annual value of the years 1909

to 1913, was not quite retained in 1917.

¹ Virginia, Utah, Texas, Massachusets, New Hampshire, Connecticut, Michigan, North Carolina, Pennsylvania, Minnesota, Idaho, Wyoming, New Mexico, New Jersey, South Carolina, and Washington.

Diamonds and other precious stones imported and entered for consumption in the United States, 1908-1917.

Year. Gla	Diamonds.				Diamonds	Total	
	Glazier's.	Dust and bort.	Rough or uncut.	Unset.	and other stones not set.	excluding pearls.	Pearls.
1908 1909 1910 1911 1912 1913 1914 1915 1916 1917	\$650,713 758,865 213,701 199,930 452,810 471,712 579,322 366,793 836,018 1,098,102	\$180, 222 50, 265 54, 701 110, 434 94, 396 100, 704 77, 408 75, 944 67, 290 349, 746	\$1,636,798 8,471,192 9,212,378 9,654,219 9,414,514 12,268,543 2,851,933 7,020,646 11,441,328 13,092,855	\$9,270,225 27,361,799 25,593,641 25,676,302 22,865,686 24,812,604 11,476,871 13,177,919 24,282,140 18,421,838	a \$1,051,747 a 3,570,540 4,003,976 3,795,175 3,405,543 2,775,811 1,635,522 a 1,078,391 a 2,303,341 a 1,883,810	\$12,789,705 40,212,661 39,078,404 39,436,054 36,232,949 40,429,374 17,121,066 21,719,693 38,930,117 34,846,351	\$910, 699 24, 848 1, 626, 083 1, 384, 376 5, 130, 376 5, 002, 624 2, 090, 018 4, 513, 909 11, 336, 971 4, 947, 509

a Including agates. Agates in 1915, \$31,657; in 1916, \$18,681; in 1917, \$19,715.

GEM NAMES.

The following list of gem names has been compiled from the literature and from correspondence with the producers of precious stones in the United States. The list is in two parts. Part I gives the name of the gem followed by the name of the mineral species to which the gem belongs. Part II aims to give all the names of the mineral species followed by the names of the corresponding gems.

Many of the names have been coined by the dealers in particular minerals for the evident purpose of increasing their sales. Many people who buy cheap gem stones under fanciful names probably would not buy the stones if they were offered under their true mineralogic names. The list herewith will enable those who are interested to look up the true mineral species of the gems offered.

The use of the name of a valuable gem mineral combined with another modifying word instead of the true name of a mineral of less value—for example, "Alaska diamond" instead of quartz or "Arizona ruby" instead of garnet—is incorrect and should be avoided. The list does not contain all the names applied to gem minerals. Such self-evident names as "milky opal" and "blue beryl" are omitted. The object of the list is to show the mineral species forming the gem and not to list all possible names which have been used for gems.

A few names of substances not minerals but commonly used as gems have been included. Artificial products, however, many of them made of glass and fraudulently sold under mineral names—for example, glass sold as "fire agate"—have been excluded.

In offering this list the Geological Survey emphatically disclaims giving any official sanction to the local or trade names applied to varieties of well-known minerals used as gem stones. In fact, the Survey strongly condemns the practice and hopes that the publication of this list, which shows the true mineral species, will remove much of the mystery attached to these trade names and will act as a deterrent on their use in the future.

To those who have aided in the compilation of this list the Geological Survey expresses its appreciation. Additions and cor-

rections will be gratefully received.

PART I.

A.

Achirite=dioptase from Siberia.

Achroite=colorless or white tourmaline.

Actinolite=green silicate of iron, calcium, and magnesium (amphibole).

Adamantine spar=hair-brown corundum.

Adelaide ruby=blood-red pyrope (garnet) from South Africa.

Adularia=orthoclase (feldspar).

Aeroides=pale sky-blue beryl.

Agalmatolite=compact mica (hydrous silicate of aluminum and potassium); also compact pyrophyllite (hydrous silicate of aluminum).

Agate=variegated chalcedony.

Agate jasper=intermediate between jasper and chalcedony with predominant translucent chalcedony; jasper with bands of chalcedony.

Agrite=brown, mottled, calcareous stone.

Alabandine ruby=red spinel of a violet tint.

Alabaster=white, fine-grained gypsum; also incorrectly applied to fine-grained and pure-white stalagmites of aragonite.

Alalite=diopside.

Alaska diamond=quartz.

Albite=silicate of aluminum and sodium (feldspar).

Albite moonstone=iridescent albite.

Alençon diamond=quartz crystal from Alençon, France.

Aleppo stone=eye agate.

Alexandrite=emerald-green to dark-green chrysoberyl which changes in color to a columbine-red by artificial light.

Allanite=black hydrous silicate of aluminum, magnesium, cerium, and iron and other elements.

Almandite (almandine)=columbine-red, or a deep crimson and violet garnet, silicate of aluminum and iron.

Almandine spinel=violet-red spinel

Alpine diamond=pyrite.

Amatrice=green, blue-green, and bluish variscite cut with its associated matrix. Amazon stone=green microcline feldspar, silicate of aluminum and potassium Amber=fossil resin.

Amber opal=opal colored brown by iron oxide.

Amberine=yellowish-green agate from the Death Valley region, Cal.

Ambroid=small pieces of inferior amber fused together.

American jade=californite (vesuvianite).

American ruby=blood-red garnet, mostly pyrope.

Amethiste basaltine=pale violet or reddish beryl.

Amethyst=purple and bluish-violet quartz, in crystals.

Amethystine quartz=quartz of an amethyst color, not necessarily in crystals. Amphibole=group of minerals, silicates of aluminum, iron, calcium, magnesium, and other elements.

Anatase=oxide of titanium. Another name for octahedrite.

Ancona ruby=quartz.

Andalusite=silicate of aluminum; also trade name for brown tourmaline.

Andesine=silicate of aluminum, sodium, and calcium (feldspar).

Andradite=garnet, silicate of iron and calcium.

Anthracite=hard iron-black coal, harder than jet or cannel coal.

Apatite=phosphate of calcium, with fluorine.

Aphrizite=black tourmaline.

Apophyllite=hydrous silicate of calcium and potassium.

Apricotine=yellowish-red quartz pebbles from vicinity of Cape May, N. J.

Aquamarine=light bluish-green or sea-green beryl.

Aquamarine chrysolite=greenish-yellow beryl.

Aquamarine topaz=greenish topaz.

Aragonite=carbonate of calcium, in orthorhombic crystals.

Arizona ruby=deep-red pyrope (garnet) from Arizona and Utah.

Arizona spinel=deep-red pyrope (garnet) from Arizona and Utah. Same as Arizona ruby.

Arkansas diamond=diamond from Arkansas; also quartz crystals from Arkansas.

Arkansite=brilliant iron-black, opaque brookite, oxide of titanium.

Armenian stone=(in part)lapis lazuli.

Arrow points=Indian arrowheads mostly made of quartz, more rarely of obsidian or other fine-grained rock.

Asparagus stone=pale-yellow apatite.

Asteria=asteriated sapphire; also any gem showing a six-ray star when cut cabochon.

Asteriated topaz=asteriated oriental topaz (yellow corundum).

Australian sapphire=deep inky blue sapphire (corundum).

Automolite=dark-green to nearly black zinc spinel. Aventurine=opaque yellow, brown, or red massive quartz containing inclusions of minute scales of some other mineral, such as mica or iron oxide.

Aventurine feldspar=sunstone. Axstone=nephrite.

Axinite=hydrous borosilicate of aluminum, calcium, iron, and manganese.

Aztec stone=chalchihuitl. Azure quartz=blue quartz.

Azure stone=lapis lazuli. Azulite=pale-blue smithsonite.

Azurite=blue, hydrous carbonate of copper.

Azurite malachite=azurmalachite.

Azurmalachite=combination of the copper carbonates azurite (blue) and malachite (green) from the copper mines of Arizona.

Baffa diamond=quartz crystal.

Bahias=diamonds from Bahia, Brazil.

Balas ruby=rose-red or pink spinel.

Barite=sulphate of barium.

Basanite=velvet black, flinty quartz.

Bastite=variety of bronzite.

Beckite=silicified coral shells or fossiliferous limestone replaced by silica.

Beekite=beckite.

Bemiscite=salmon-colored feldspar from Bemis, Maine.

Benitoite=blue silicate of barium and titanium.

Beryl=silicate of aluminum and beryllium with small amounts of other elements.

Beryllonite=phosphate of beryllium and sodium.

Bishop's stone=amethyst.

Bixbite=red and rose-colored beryl from Utah.

Black amber=jet.

Black lava glass=obsidian.

Black opal=opal in a dark matrix; also opal with vivid colors.

Blood agate=flesh-red, pink, or salmon-colored agate from Utah.

Blood jasper=bloodstone.

Bloodstone=massive dark-green jasper (plasma) with red or blood-colored spots; also hematite (German usage).

Blue chrysoprase=chalcedony stained blue with chrysocolla. Blue john=dark-blue fluorite, tinged with violet.

Blue malachite=azurite.

Blue moonstone=blue chalcedony from the Death Valley region, Cal. Blue rock=lapis lazuli from California.

Blue white=diamond of highest grade. Bobrowska garnet=grossularite (garnet). Bohemian diamond=rock crystal (quartz).

Bohemian garnet=dark blood-red pyrope (garnet).

Bohemian topaz=yellow quartz. Bohemian ruby=red or rose quartz.

Bonamite=translucent apple-green smithsonite from New Mexico.

Bone turquoise=teeth of fossil animals (mammoths, mastodons, etc.) stained blue by phosphate of iron.

Bottle stone=moldavite.

Bowenite=unusually translucent serpentine of a cream color.

Brazilian aquamarine=greenish topaz.

Brazilian diamond=diamond from Brazil; also clear quartz from Brazil,

Brazilian emerald=green tourmaline. Brazilian pebble=rock crystal (quartz). Brazilian peridot=yellow-green tourmaline.

Brazilian ruby=rose-red or pink topaz, both naturally and artificially colored. Most of the pink or reddish topazes have been artificially colored by heating the dark-yellow ones.

Brazilian sapphire=light-blue or greenish topaz; also blue tourmaline.

Brazilian topaz=golden to reddish-yellow topaz; also smoky quartz artificially changed to yellow by heat.

Briançon diamond=quartz crystal from southeastern France, cut in Briançon. Brighton emerald=green bottle glass purposely thrown on beach at Brighton, England.

Brilliant=diamond.

Bristol diamond=quartz crystal from Cornwall, England.

Bronzite=silicate of magnesium and iron; variety of enstatite. Brookite=hair-brown, yellowish, reddish, or ruby-red, transparent to translucent oxide of titanium, in orthorhombic crystals.

Brown coal=brown or brownish-black coal, often retaining the original wood texture.

Brown jacinth=vesuvianite.

Brown spar=ankerite from Chester County, Pa.

Bull's-eye=labradorite with a dusky sheen.

Burma ruby=blood-red ruby (corundum).

Burmite=amber from Burma.

Burnt amethyst=purple amethyst changed to brownish-yellow by heat.

Burnt Brazilian topaz=burnt topaz.

Burnt topaz=yellow topaz from Brazil which has been changed to pink by heat. Byssolite=fine greenish hair-like asbestos or actinolite, inclosed in quartz.

By-water=yellow-tinted diamond.

C

Cabochon=any gem cut round, without facets.

Cacholong=opaque, porcelain-like, milky-white opal. Cacholong opal=feebly translucent common opal.

Caesium beryl=beryl containing several per cent of caesium, one of the rarer alkalies. The beryl is generally colorless or pink.

Cairngorm=yellow to smoky-brown, gray, or black quartz. Calamine=hydrous silicate of zinc. In England calamine is called smithsonite.

Calcite=carbonate of calcium in rhombohedral (hexagonal) crystals.

Calcomalachite=mixture of carbonate of calcium and malachite, from Arizona. California cat's-eye=compact serpentine, sufficiently fibrous to show a silky luster and to yield a cat's-eye effect when cut cabochon, from Tulare Co.,

California iris=kunzite (spodumene).

California jade=californite (vesuvianite).

California moonstone=white or gray chalcedony.

California onyx=dark-brown aragonite.

California ruby=garnet.

California tiger-eye=California cat's-eye.

Californite=compact, translucent, green vesuvianite.
Callainite=translucent green hydrous phosphate of aluminum (probably variscite).

Cameo=relief carving on a gem (the opposite of intaglio).

Canary=yellow diamond.

Canary beryl=greenish-yellow beryl.

Cancrinite-complex hydrous silicate of aluminum, calcium, and sodium, and the carbonate radicle.

Candle coal=cannel coal.

Cannel coal=dark grayish-black or brownish-black coal.

Cape chrysolite=green prehnite from South Africa.

Cape garnet=bright red-yellow almandite (garnet).

Cape May diamond=colorless and clear quartz crystal from Cape May, N. J. Cape ruby=blood-red pyrope (garnet) from South Africa.

Cape=diamond having a yellowish tinge.

Carbonado=black diamond, not crystallized. Carbuncle=clear deep-red almandite garnet; also any red, scarlet, or crimson garnet cut cabochon. The term is also improperly applied to any red stone especially if cut cabochon.

Carmazul=oxidized copper ore showing red, brown, blue, and green colors, from Lower California, Mexico; composed of jasper, chalcedony, quartz, hematite, chrysocolla, and malachite.

Carnelian=translucent red chalcedony.

Carnelian-onyx=agate with red and white bands.

Cassinite=pearly, bluish-green aventurine feldspar from Delaware County, Pa. Cassiterite=oxide of tin.

Cat sapphire=dark-blue sapphire.

Catalinite=beach pebbles from Santa Catalina Island, Cal.

Catalina sardonyx=catalinite.

Catlinite=compact red clay.

Cat's-eye=any mineral having a changeable luster or showing opalescence without play of colors; also true cat's-eye (chatoyant chrysoberyl); also chatoyant quartz.

Celestial stone=turquoise.

Celestial precious stone=olivine from meteorite.

Cer-agate=chrome-yellow agate from Brazil. Ceylon cat's-eye=chrysoberyl cat's-eye.

Ceylon chrysolite=yellowish-green or greenish-yellow tourmaline.

Ceylon hyacinth=garnet. Ceylon opal=moonstone.

Ceylon peridot=honey-yellow or yellowish-green tourmaline.

Ceylon ruby=ruby from Ceylon; also deep-red almandine garnet from Ceylon; also any pale or pink ruby.

Ceylon sapphire=pale-blue sapphire (corundum). Ceylonese zircon=fire-red cloudy zircon.

Ceylonite=black spinel.

Chalcedony=compact silica, transparent or translucent, with a waxy luster.

Chalcedony onyx=agate with white and pale bands.

Chalcedonyx=chalcedony with alternating stripes of gray and white.

Chalchihuitl=supposed to have been applied to blue, gray, or green calamine from Mexico, also to turquoise, emerald, prase, green jasper, and jadeite. Chalchuite=green turquoise.

Changeant=labradorite.

Chert=compact silica, includes flint, hornstone, and jasper.

Chessy copper=azurite.

Chessylite=azurite.

Chesterlite=microcline feldspar from Chester County, Pa. Chiastolite=variety of andalusite with crosslike marking.

Chinarump=petrified wood from Arizona.

Chlorastrolite=impure variety of prehnite or thomsonite.

Chloromelanite=dark-green to nearly black jadeite. Chloropal= green opal from Silesia, Germany. Mineralogically, a hydrous silicate of iron.

Chlorophane=variety of fluorite which phosphoresces with a greenish light on being slightly heated as by friction or by the heat of the hand,

Chlorospinel=green spinel.

Chlorutahlite=utahlite (compact variscite).

Chondrodite=silicate of magnesium and iron, with fluorine.

Chrome garnet=uvarowite (garnet).

Chromic iron=chromite.

Chromite=oxide of chromium and iron.

Chrysoberyl=oxide of aluminum and beryllium.

Chrysoberyllus=greenish-yellow, honey-yellow, or wine-yellow beryl.

Chrysocarmen=very similar to carmazul.

Chrysocolla=green to blue hydrous silicate of copper.

Chrysolithus=pale yellowish-green beryl.

Chrysolite=olivine or peridot; also light-golden chrysoberyl (incorrect usage); also improperly applied to any light greenish-yellow to yellowish-green transparent gem.

Chrysoprase=apple-green, olive-green, or whitish-green, translucent chalcedony. Cinnamon stone=essonite (garnet).

Citrine=golden-yellow quartz.

Cloudy chalcedony=chalcedony with dark cloudy spots in a light-gray transparent base.

Cobaltite=metallic sulphide and arsenide of cobalt and iron.

Cobra stone=chlorophane.

Colophonite=brownish-black and radite (garnet), characterized by a resinous luster; silicate of iron and calcium.

Colorado ruby=pyrope (garnet). Same as Arizona ruby.

Colorado topaz=topaz from Colorado; also citrine (yellow quartz).

Common opal=translucent, only slightly colored opal without fire or play of colors.

Comptonite=thomsonite.

Congo emerald=dioptase from the Congo, Africa.

Copper emerald=dioptase.

Copper-ore gem=mixture of various copper minerals, such as green malachite, green or blue chrysocolla, blue azurite, red cuprite.

Copper-pitch ore=compact black or dark-brown mixture of oxides of iron and copper.

Coral=hard calcareous structure secreted in or by the tissues of various marine zoophytes. When fossilized, the calcareous matter is often replaced by

silica (see beckite). Coral agate=beckite (see coral).

Cordierite=hyrous silicate of aluminum, iron, and magnesium.

Cornish diamond=quartz crystal from Cornwall, England.

Corundum=oxide of aluminum.

Corundum cat's-eye=corundum with a bluish, reddish, or yellowish reflection of light of a lighter shade than the stone itself.

Cotterite=quartz having a metallic pearly luster.

Creoline=purplish epidotized trap rock from Massachusetts.

Creolite=banded jasper from Shasta County, Cal. Crimson night stone=purple fluorite from Idaho.

Crispite=sagenite.

Crocidolite=fibrous hornblende of a bluish or greenish color, hydrous silicate of iron and magnesium. The altered form consists of silica colored yellow and brown with oxide of iron and is called tiger-eye.

Cross stone=chiastolite (andalusite); also staurolite.

Crystal=colorless transparent quartz; also artificial flint glass.

Cupid's darts=quartz crystal with needle-like inclusions of goethite.

Cyanite=kyanite.

Cymophane=chrysoberyl having a bright spot of light which seems to float over the surface as the stone is moved.

Cyprine=bright-green vesuvianite.

D.

Damourite=compact mica, a result of the alteration of some preexisting mineral.

Danburite=borosilicate of calcium.

Datolite=compact massive hydroborosilicate of calcium.

Dauphine diamond=rock crystal (quartz).

Davidsonite=greenish-yellow beryl from vicinity of Aberdeen, Scotland.

Delawarite=aventurine feldspar from Delaware County, Pa.

Demantoide=olive-green, brown, blackish-green, or light-green grossularite (garnet) from the Ural Mountains, Russia.

Dendrite=having the form of a tree.

Dendritic agate=mocha stone and moss agate.

Diallage=foliated variety of diopside.

Diamond=carbon, in isometric crystals.

Diaspore=hydrous oxide of aluminum.

Dichroite=cordierite.

Diopside=silicate of calcium and magnesium (pyroxene).

Dioptase=green hydrous silicate of copper.

Disthene=kyanite.

Doublet=consists of a real gem cemented to a piece of glass cut and colored to imitate the real stone.

Dravite=brown tourmaline.

Drop of water=rounded (water-worn), colorless, and transparent pebble of topaz.

Dumortierite=blue or lavender hydroborosilicate of aluminum.

Dysluite=yellow or grayish-brown spinel.

E.

Edisonite=mottled blue turquoise.

Egyptian jasper=banded yellow, red, brown, or black jasper.

Egyptian pebble=Egyptian jasper.

Elaeolite—silicate of aluminum, sodium, and potassium. Same as nephelite.

Eldoradoite=iridescent quartz from Eldorado County, Cal.

Elie ruby=red pyrope (garnet) from Elie in Fifeshire, Scotland.

Emerald=green beryl; also improperly applied to any green stone.

Emerald copper=dioptase.

Emerald malachite=dioptase.

Emeraldine=chalcedony artificially colored green.

Emeralite=green and bluish-green tourmaline from San Diego County, Cal.

Emerandine=dioptase.

Enhydros=hollow nodules of chalcedony partly filled with water.

Enstatite=silicate of magnesium.

Epidote=greenish hydrous silicate of aluminum, iron, and calcium.

Essonite=yellow variety of grossularite (garnet).

Euclase=bluish or greenish hydrous silicate of aluminum and beryllium.

Evening emerald=peridot.

Euxenite=complex mineral containing columbium, titanium, and yttrium, and other elements.

Eye agate—concentric rings of agate with a dark center; also thomsonite.

Eyestone=thomsonite.

Fairy stone=twinned crystal of staurolite, forming a cross.

False amethyst=purple fluorite. False chrysolite=moldavite.

False diamond=quartz crystal.

False emerald=green fluorite.

False hyacinth=garnet.

False lapis=agate or jasper artificially colored blue. False lapis lazuli=lazulite.

False ruby=red fluorite.

False sapphire=blue fluorite.

False topaz=yellow quartz; also yellow fluorite.

Fancy=term applied to stones having value other than intrinsic value. Fancy agates=agates showing delicate markings and intricate patterns.

Fancy stone=unusual stone.

Fashoda garnet=dark brownish-red pyrope (garnet).

Feldspar=group of minerals, including orthoclase, microcline, albite, oligoclase, andesine, labradorite; silicates of aluminum and potassium, sodium, or calcium.

Feldspar sunstone=sunstone.

Female sapphire=light-colored sapphire.

Feminine=term applied to stones of a paler color than masculine ones. Fergusonite=black mineral composed chiefly of columbate of yttrium.

Figure stone=agalmatolite.

Fire marble=dark-brown shell marble with brilliant firelike internal reflections.

Fire opal=red or yellowish-red opal.

First bye=diamond with a faint greenish tint.

First water=pure and colorless diamond.

Fish-eye=moonstone.

Fish-eye stone=apophyllite.

Flash opal=opal in which the color shows as a single flash.

Flêches d'amour=sagenite (quartz).

Fleurus diamond=quartz crystal.

Flint=compact silica, opaque, and of dull colors.

Floating light=cymophane.

Flos ferri=aragonite in shapes resembling coral.

Flowers of iron=flos ferri (aragonite).

Flower stone=beach pebbles (chalcedony) with flower patterns.

Fluorspar=fluorite.

Fluorite=fluoride of calcium.

Fool's gold=pyrite.

Fortification agate=agate with parallel zigzag lines.

Fossil coral=coral replaced by silica (beckite).

Fossil pineapple=opal pseudomorph after glauberite, from New South Wales.

Fossil turquoise=bone turquoise.

Fowlerite = variety of rhodonite containing zinc.

Franklinite=black oxide of iron, manganese, and zinc.

Frost stone=translucent gray chalcedony with pure-white patches or tufts, like snowflakes, scattered through it, from the Mojave desert, Cal.

Fuchsite=green muscovite (mica).

G.

Gadolinite=velvety-black silicate of yttrium, beryllium, iron, and other elements.

Gahnite=green zinc spinel.

Garnet=group of silicate minerals. The species are: Almandite, silicate of aluminum and iron; andradite, silicate of iron and calcium; grossularite, silicate of aluminum and calcium; pyrope, silicate of aluminum and magnesium; spessartite, silicate of aluminum and manganese; uvarovite, silicate of chromium and calcium.

Garnierite=green hydrous silicate of nickel and magnesium.

Gem=cut and polished precious stone.

Gemstone=gem.

Geneva ruby=synthetic ruby made in Geneva, Switzerland.

Geyserite=siliceous deposit from a geyser.

Gibraltar stone=banded, mottled, or clouded carbonate of calcium.

Girasol=corundum cat's-eye with a bluish, reddish, or yellowish reflection of light, lighter in shade than the stone itself, which moves on the surface of the stone like the lines of a starstone; also opal (see girasol opal); also moonstone (feldspar).

Girasol opal=fire opal.

Glass=artificial noncrystallized substance composed of silica and several bases, notably an alkali and lead.

Glass agate=obsidian.

Goethite=hydrous oxide of iron.

Golconda diamond—diamond obtained from the regions watered by Krishna and Godavari rivers but polished in Golconda, India.

Gold=metallic element, often mounted as found, as a nugget. Gold opal=opal which shows yellowish light over a large area.

Gold quartz=massive quartz inclosing gold.

Golden beryl=clear bright-yellow beryl.

Golden stone=greenish-yellow chrysolite (olivine).

Golden topaz=topaz of a golden-yellow color; also golden-yellow citrine (quartz).

· Goldstone=aventurine. An imitation of goldstone consists of glass with included metal filings (fraudulently sold as fire agate).

Gooseberry stone=brownish-green grossularite (garnet).

Goshenite=colorless, white, or bluish beryl from Goshen, Mass.

Goutte d'eau=colorless topaz.

Goutte de sang=blood-red spinel.

Graphic granite=pegmatite composed of quarts and feldspar so arranged as to simulate writing.

Green agate=zonochlorite.

Green garnet=any green garnet; also incorrectly applied to green enstatite from South Africa.

Green starstone=chlorastrolite.

Greenstone=zonochlorite; also chlorastrolite; also californite (vesuvianite).

Grossularite=pale-green or yellow garnet.

Guarnaccino=yellowish-red garnet. Same as vermeille.

Gypsum=hydrous sulphate of calcium.

H.

Hair stone=quartz with inclusions of hairlike crystals or fibers of some other mineral. Same as sagenite.

Harlequin opal=opal in which the colors form a minute mosaic or are set in small squares.

Hatchet stone=nephrite.

Haüynite=complex silicate of aluminum, calcium, sodium, and potassium with the sulphate radicle.

Hawk eye=quartz with inclusions of fine blue parallel fibers of crocidolite. Heliodor=beryl from Rossing, German Africa; contains a small amount of uranium and is weakly radioactive. By daylight gold-yellow, by artificial light a delicate blue-green.

Heliolite=sunstone (feldspar).

Heliotrope=bloodstone (quartz).

Hematite=oxide of iron, either black or red. Hemimorphite=calamine (English usage).

Hercynite=black to dark-green spinel composed of the oxides of aluminum and iron.

Herkimer diamond=clear quartz crystal from Herkimer County, N. Y.

Hessonite=variety of grossularite (garnet).

Hetaerolite=brilliant-black radiated mineral composed of the oxides of zinc and manganese.

Hiddenite=green or yellowish-green spodumene.

Horatio diamond=colorless quartz from Arkansas. Hornblende=silicate of aluminum, iron, calcium, mas

Hornblende=silicate of aluminum, iron, calcium, magnesium, and other elements.

Hornstone=compact form of silica, like flint but more brittle.

Hungarian cat's-eye=quartz cat's-eye.

Hyacinth=red zircon; also wrongly applied to essonite or other light-colored garnets, to yellowish-red spinel from Brazil, and to red iron-stained quartz.

Hyacinth of Compostella=quartz, with red hematite inclusions.

Hyacinthozontes=sapphire-blue beryl.

Hyalite=clear and colorless opal.

Hyalosiderite= rich olive-green olivine, containing much iron.

Hydrophane=opal which becomes transparent in water.

Hypersthene=silicate of magnesium and iron, variety of enstatite.

Т

Iceland agate=obsidian.
Iceland spar=clear calcite.
Iceland agate lava=obsidian.
Ichthyophthalmite=apophyllite.

Idocrase=vesuvianite.

Ilmenite=black oxide of iron and titanium.

Image stone=agalmatolite.

Imperial yu-stone=green aventurine quartz. Ilvaite=hydrous silicate of iron and calcium.

Inca stone=pyrite.

Indian agate=moss agate.

Indian topaz=saffron-yellow topaz; also yellow quartz.

Indicolite=blue tourmaline.

Iolanthite=jasper from Crooked River, Crook County, Oreg.

Iolite=cordierite.

Iridescent quartz=rock crystal (quartz) filled with fine cracks containing air films which reflect the colors of the rainbow.

Iris=iridescent quartz; also applied to other iridescent minerals. California iris is spodumene.

Irish diamond=quartz crystal from Ireland.

Iron glance=hematite.

Isle of Wight diamond=quartz crystal. Isle Royal greenstone=chlorastrolite.

Isopyre=very impure opal.

Italian chrysolite=vesuvianite.

Iztac Chalchihuitl=white or green Mexican onyx.

J.

Jacinth=yellow zircon, also improperly applied to essonite and other yellowish garnets.

Jade=two minerals, nephrite and jadeite. True jade is nephrite; many other minerals are also called jade, such as pectólite, vesuvianite, garnet, bowenite, serpentine, plasma, prehnite, agalmatolite, sillimanite, and saussurite (a rock).

Jadeite=greenish silicate of aluminum and sodium (pyroxene).

Jager=bluish-white diamond of modern cut. Originally referred to diamond from the Jagersfontein mine, South Africa.

Jargon=white or grayish-white zircon.

Jargoon=jargon.

Jasp agate=intermediate between jasper and chalcedony with predominant opaque jasper.

Jasper=massive quartz, impure and opaque, containing more iron oxide than

Jasper opal=deeply colored opal with many included impurities.

Jasperine=banded and variously colored jasper.

Jet=pitch-black or velvet-black coal sufficiently hard and compact to receive a brilliant polish.

Job's tears=local name for peridot from Arizona and New Mexico; also hyalosiderite, a rich olive-green olivine.

Kashmir sapphire=cornflower-blue corundum.

Keystoneite=blue chrysocolla or chalcedony colored by copper silicate.

Kidney stone=nephrite.

King topaz=clear pink, orange, red, yellow, or flesh-colored corundum.

Kinradite=jasper with spherulites of quartz, from the region around San Francisco, Cal.

Kornerupine=silicate of aluminum and magnesium.

Kunzite=transparent lilac spodumene.

Kyanite=silicate of aluminum.

L.

Labrador feldspar=labradorite.

Labrador hornblende=hypersthene.

Labrador spar=labradorite. Labrador stone=labradorite.

Labradorite=feldspar, silicate of alumium, sodium, and calcium.

Lake George diamond=clear quartz crystal from Herkimer, N. Y.

Lake Superior greenstone=chlorastrolite.

Lapis lazuli=rock composed essentially of the minerals lazurite, haijynite, scapolite, calcite, pyroxene, amphibole, mica, and feldspar.

Lava=volcanic rock.

Lavendine=amethyst (quartz).

Lazulite=blue hydrous phosphate of aluminum, iron, and magnesium.

Lazurite=blue silicate of aluminum, calcium, and sodium, with the sulphate radicle.

Lechosos opal=opal showing deep-green flashes of color or specked with green and carmine; also used for milky opal.

Leelite=deep flesh-red orthoclase, having a waxy luster.

Lennilite=greenish feldspar from Lenni Mills, Delaware County, Pa.

Leopardite=rock (porphyry) with black spots of oxide of manganese. Lepidolite=mica, hydrous silicate of aluminum, lithium, and potassium, with fluorine.

Lenco sapphire=white sapphire.

Lignite=brown coal showing the form and fiber of the original tree.
Lintonite=zeolite, probably thomsonite, with alternating bands of green and red.

Lithia emerald=green spodumene.

Lithoxyle=wood opal showing woody structure.

Lodestone=magnetite (oxide of iron) which shows polarity.

Love arrows=sagenite (quartz).

Lucky stone=fairy stone (staurolite).

Lumachelle=fire marble.

Lydian stone=basanite (quartz).

Lynx sapphire=water sapphire (cordierite); also vary dark blue sapphire. Lynx stone=cordierite.

M

Macle=chiastolite.

Madeira topaz=citrine (quartz).

Magic stone=hydrophane.

Magnetite=black magnetic oxide of iron.

Mahogany ore=compact mixture of oxides of iron and copper.

Malachite=green hydrous corbonate of copper.

Malacolite=diopside.

Male sapphire=deep-colored sapphire.

Marble=recrystallized limestone, carbonate of calcium.

Marcasite=sulphide of iron, in orthorhombic crystals. The same sulphide of iron, in isometric crystals, is pyrite.

Marekanite=mottled brown and black obsidian.

Mariposite=green compact micaceous hydrous silicate of aluminum, magnesium, and potassium.

Marmorosch diamond=quartz crystal from Marmaros Comitat, Hungary.

Masculine=term applied to stones of a deep and rich color.

Matara diamond=colorless or faintly smoky zircon from Ceylon; the palebrown zircons are sometimes decolorized by heat,

Matrix=rock surrounding mineral.

Meerschaum=sepiolite.

Melanite=dull-black andradite (garnet).

Menaccanite=ilmenite.

Menilite=grayish-brown banded, sometimes concretionary, opal from vicinity of Paris, France.

Mesolite=zeolite similar to thomsonite in composition, hydrous-silicate of alumi-

num, calcium, sodium, and potassium. Mexican onyx=banded, mottled, or clouded carbonate of calcium (aragonite). Mica=group of silicate minerals, containing aluminum, and potassium, with water, and other elements.

Microcline=potash feldspar in triclinic crystals, silicate of aluminum and

potassium.

Microlite=essentially a tantalate of calcium.

Mineral turquoise=true turquoise.

Mocha agate=translucent agate or chalcedony with brown, red, or black dendritic figures like trees or plants.

Mocha stone=chalcedony with brown, red, or black, treelike inclusions of manganese oxide. Mohave moonstone=translucent, lilac-tinted chalecedony from the Mohave

Desert, Cal. Moldavite=dark-green glass resembling obsidian.

Monazite=phosphate of cerium ad other rare-earth elements.

Money stone=local name in Pennsylvania for rutile.

Montana agate=moss agate from Montana.

Montana ruby=garnet.

'Montana sapphire=corundum; generally applied to dark-blue or greenish-blue sapphire (compare river sapphire).

Mont Blanc ruby=quartz.

Moonstone=feldspar (usually oligoclase or the adularia variety of orthoclase) showing a pearly opalescence; also commonly but erroneously applied to some white or gray chalcedony and to satin spar (gypsum).

Mora diamond=probably quartz crystal.

Morganite=rose-colored beryl from Madagascar.

Moriah stone=granular and spotted verd antique (serpentine).

Morion=deep-black almost opaque smoky quartz.

Moroxite=deep-green or blue-green apatite.

Mosaic agate=brecciated Mexican onyx.

Moss agate=chalcedony with greenish mosslike or treelike inclusions.

Moss jasper=opaque and translucent chalcedony crowded full with mosslike markings.

Moss opal=milky opal with black mosslike dendritic inclusions.

Mother of emerald=prase (quartz).

Mother-of-opal=rock matrix containing minute disseminated specks of precious opal.

Mother-of-pearl=the hard iridescent internal layer of various shells.

Mountain mahogany=banded obsidian.

Muller's glass=hyalite.

Myrickite=agate or chalcedony containing bright-red inclusions of cinnabar, from the Death Valley region, Cal.

Nacre=mother-of-pearl.

Natrolite=zeolite, hydrous siliciate of aluminum, and sodium.

Needle stone=sagenite (quartz).

Nephelite=silicate of aluminum, sodium, and calcium.

Nephrite=true jade, a tough compact fine-grained tremolite (white) or actinolite (green).

Nevada diamond=obsidian, artificially decolorized.

New rock=bone turquoise (in distinction from "old rock"=true turquoise). New Zealand greenstone=serpentine, richly colored, from New Zealand; also jade or nephrite from New Zealand.

Nicolo=onyx with a black or brown base and a bluish-white thicker wavy, top laver.

Nigrine=dark-brown to black rutile with some iron.

Noble opal=precious opal.

Novaculite=fine-grained hard sandstone; flint (quartz).

0.

Obsidian=lava in form of glass.

Ocean spray=satin spar (gypsum).

Occidental agate=agate less perfect than oriental agate.

Occidental amethyst=true amethyst (quartz).

Occidental cat's eye=quartz cat's eye.

Occidental chalcedony=somewhat opaque chalcedony; more opaque than oriental chalcedony.

Occidental diamond=rock crystal (quartz).

Occidental topaz=yellow quartz.

Occidental turquoise=bone turquoise.

Octahedrite=oxide of titanium in tetragonal crystals, with slightly different properties from rutile.

Odontolite=bone turquoise. Oeil de boeuf=labradorite.

Old rock=turquoise from Persia.

Oligoclase=feldspar, silicate of aluminum, sodium, and potassium. Olivine=silicate of magnesium and iron. The world olivine is used as a trade name for green garnet (demantoid from the Ural Mountains), and is also improperly applied to any green stone. The following distinctions are sometimes applied to the mineral olivine: Chrysolite, inclining to yellow; peridot, inclining to yellowish green; olivine, inclining to green.

Onegite=quartz with inclusions of hair-like crystals of goethite.

Onyx=banded chalcedony with alternating bands of cloudy milk-white and another color, usually black.

Oolite=concretionary massive limestone (carbonate of calcium) made up of minute spherical grains.

Opal=amorphous massive form of hydrous silica.

Opal agate=banded opal having alternate layers of opal and agate.

Opal jasper=jasper opal.

Opal onyx=alternate layers of precious and of common opal.

Opalescent chrysolite=chrysoberyl.

Opaline=opal matrix.

Opaline feldspar=labradorite.

Ophiolite=serpentine.

Orange topaz=same as Spanish topaz, smoky quartz changed to yellow by

Oregon jade=californite (vesuvianite).

Oriental=variety of corundum (not necessarily found in the Orient).

Oriental agate=finely marked and very translucent agate.

Oriental alabaster=aragonite.

Oriental amethyst=purple corundum.

Oriental aquamarine=light-green corundum.

Oriental cat's-eye=chrysoberyl cat's-eye; also smoky corundum.

Oriental chalcedony=very translucent chalcedony (compare with occidental

Oriental chrysoberly=yellowish-green corundum.

Oriental chrysolite=greenish-yellow corundum; also chrysoberyl.

Oriental emerald=green corundum.

Oriental garnet=almandine (garnet). Oriental girasol=girasol (corundum).

Oriental hyacinth=rose-colored corundum.

Oriental hyacinth=aurora-red corundum.

Oriental jasper=bloodstone (quartz).

Oriental lapis=lapis lazuli.

Oriental moonstone=pearly corundum.

Oriental onyx=banded, mottled, or clouded stalagmites (aragonite).
Oriental opal=Hungarian opal carried to the Orient by merchants and then shipped back to Europe.

Oriental peridot=green corundum.

Oriental sapphire=(in part) blue corundum.

Oriental smaragd=green corundum.

Oriental sunstone=girasol (corundum).

Oriental topaz=yellow corundum.

Oriental turquoise=turquoise.

Orthoclase=potash feldspar in monoclinic crystals, silicate of aluminum and potassium.

Orthose=moonstone (feldspar).

Ouachita stone=novaculite (whetstone); quartz.

Ouvarovite=emerald-green garnet colored by chromium.

Ox-eye=labradorite (feldspar).

Pagoda stone=agalmatolite.

Pagodite=agalmatolite.

Paphos diamond=quartz.

Parisite=carbonate of cerium and other rare elements, with fluorine.

Paste=artificial lead glass used to imitate gems.

Paulite=hyperstene.

Pealite=opal-like variety of geyserite (silica).

Pearl=lustrous calcareous concretion with animal membrane between successive layers, deposited in the shells of various mollusks. Not a mineral but an animal product.

Pearlite=obsidian with spherulites.

Pearlylite=variety of obsidian.

Pebble=rock crystal (quartz). Pecos diamond=quartz from Pecos River, Texas. Pectolite=hydrous silicate of calcium and sodium.

Pegmatite=coarsely grained rock composed of quartz and feldspar.

Pelhamite=variety of serpentine.

Peliom=cordierite.

Pennsylvania diamond=iron pyrite.

Peridot of Ceylon=Same as Ceylon peridot, honey-yellow tourmaline.

Peridot=olivine. (See olivine)

Peristerite=iridescent albite (feldspar).

Persian lapis=lapis lazuli.

Perthite=potash feldspar (orthoclase or microcline) with laminae of soda feldspar (albite).

Peruvian emerald=the best emeralds from Muzo, Colombia.

Petoskey agate=cemented portions of fossil coral (beckite).

Petrified honeycomb=beckite.

Petrified wood=wood replaced by silica. Phenacite=silicate of beryllium.

Phenomenal gem=one which shows a play or change of color by artificial light, or shows a movable line of light.

Piedmontite=brownish-red variety of epidote.

Pin fire opal=opal in which the area of the individual colors is very small.

Pink topaz=topaz either naturally pink, or artificially colored pink by heating the yellow or brown varieties. Pink wollastonite=lilac-colored pyroxene (diopside) from the region of San

Francisco, Cal.

Pipestone=catlinite (compact red clay).

Pisolite=concretionary massive limestone, similar to oolite but made up of larger spherical grains,

Pistacite=greenish epidote.

Pitch opal=brown opal with a pitchy luster.

Pitchstone=obsidian of a pitchy luster.

Plasma=massive translucent quartz, dark grass-green in color, sometimes with white or yellow inclusions of celadonite or of delessite.

Pleonaste=black spinel.

Polycrase=black mineral similar in composition to euxenite.

Porcelain jasper=baked and hardened clay.

Porphyry=rock, variegated in structure, with individual crystals much larger than the fine-grained matrix.

Potstone=soapstone (impure talc).

Prase=massive, translucent, and spotted quartz of a green to leek-green color caused by inclusions of minute crystals of actinolite or other minerals.

Prase opal=apple-green translucent opal.

Precious coral=red coral.

Precious opal=opal showing a play of colors.

Precious schorl=tourmaline.

Prehnite=greenish hydrous silicate of aluminum and calcium.

Prismatic moonstone=clouded chalcedony (quartz) from Mohave Desert, Cal.

Prismatic quartz=cordierite.

Prosopite=hydrous fluoride of aluminum and calcium.

Pseudochrysolite=moldavite. Pseudodiamond=quartz crystal. Pseudoemerald=malachite.

Pyrite=sulphide of iron, in isometric crystals.

Pyrope=blood-red garnet, silicate of aluminum and magnesium.

Pyroxene=group of complex silicates of aluminum, iron, calcium, magnesium, and other elements.

Q.

Quartz=crystallized silica.

Quebec diamond=quartz crystal.

Quinzite=rose-colored common opal.

R.

Radio opal=opal of a smoky color caused by organic inclusions or impurities. Radiumite=mixture of black pitchblende, yellow uranotile, and orange gummite.

Rainbow agate=agate which shows iridescence when cut across the concentric structure.

Rainbow quartz=iridescent quartz.

Rattle boxes=limonite geodes from Chester County, Pa.

Realgar=orange sulphide of arsenic.

Reconstructed gem=one artificially made by fusing and recrystallizing fragments of natural gems.

Red stone=ruby.

Resin opal=opal with a resinous luster.

Rhinestone=rock crystal (quartz).

Rhodochrosite=pink carbonate of manganese.

Rhodolite=rose-colored garnet, between pyrope and almandite; silicate of aluminum, iron, and magnesium; from Macon County, N. C.

Rhodonite=pink silicate of manganese.

Riband agate=agate with parallel layers.

Riband jasper=jasper with differently colored, alternating bands, Ribbon agate=banded agate.

Ring agate=agate with differently colored bands arranged in concentric circles.

Ripe diamond=true diamond (see unripe diamond).

River agate=moss-agate pebbles found in brooks and streams.

River sapphire=light-colored sapphire from Montana. Rock crystal=clear quartz crystal.

Rock ruby=red garnet (pyrope),

Rocky Mountain ruby=garnet.

Romansovite=brown grossularite (garnet), silicate of aluminum and calcium.

Rosaline=thulite (pink zoisite).

Rose quartz=massive rose-red to pink quartz.

Rose topaz=pink topaz.
Roselite=pink garnet. Mineralogically a hydrous arsenate of calcium and cobalt.

Royal topaz=blue topaz.

Rubasse=quartz artificially stained red.

Rubellite=pink and red tourmaline.

Rubicelle=yellow or orange-red spinel.

Rubino-di-rocca=red garnet having a tinge of violet.

Ruby=red corundum.

Ruby spinel=deep-red spinel.

Ruin aragonite=brecciated Mexican onyx (aragonite).

Rutile=oxide of titanium.

S.

Sabalite=yellowish to greenish banded phosphatic material, similar to or inclosing variscite, from Utah.

Sacred turquoise=pale-blue smithsonite.

Sagenite=transparent quartz with inclusions of hairlike or needle-like crystals or fibers of some other mineral, generally rutile.

Samarskite=black mineral of complex composition, essentially a columbate of yttrium, uranium, and iron.

Sandy sard=sard dotted with darker spots (quartz). Saphir d'eau=water sapphire (blue cordierite).

Sapparé=transparent kyanite.

Sapphire=blue corundum. The name is also applied to colorless and colored (except red) corundum. Sapphire quartz=blue quartz.

Sapphirine=blue chalcedony, blue quartz; also blue spinel; silicate of aluminum and magnesium.

Sard=chalcedony of a rich brown color, with a reddish tint; brownish-red or dark-brown carnelian (sardoine).

Sardoine=brownish-red or dark-brown carnelian.

Sardonyx (sard-onyx)=white and brown banded chalcedony.

Satelite=serpentine cat's-eye.

Satin spar=finely fibrous gypsum having a pearly opalescence; also finely fibrous calcite having a silky luster; also finely fibrous aragonite having a silky luster.

Saussurite=greenish to white or gray rock composed chiefly of zoisite. Saxon chrysolite=pale wine-yellow or greenish-yellow topaz tinged with green. Saxon topaz=pale wine-yellow topaz; also citrine (quartz).

Scapolite=group of minerals composed of silicates of aluminum, calcium, and sodium, with the chloride, carbonate, or sulphate radicles.

Scarab=precious stone inscribed with symbols, engraved like a beetle.

Schaumburg diamond=quartz crystal from Schaumberg, Hesse, Germany.

Schiller quartz=quartz cat's-eye. Schiller spar=bastite (enstatite). Schnecken topaz-Saxon topaz.

Schorl=black tourmaline.

Schorlomite=black garnet containing considerable titanium.

Scotch topaz=smoky quartz.

Selenite=colorles, transparent gypsum.

Semicarnelian=yellow agate.

Semiopal=colorless to strongly colored somewhat opaque, common opal.

Semiturquoise=soft pale-blue turquoise. Sepiolite=hydrous silicate of magnesium. Serpentine=hydrous silicate of magnesium.

Serpentine cat's-eye=serpentine showing when cut a changeable luster or opalescence without play of colors.

Siam=dark-red ruby.

Siam ruby=dark-red ruby from Siam; also red spinel. Siberian amethyst=rich or dark-colored amethyst.

Siberian aquamarine=very light greenish-blue beryl.

Siberian chrysolite=demantoid (garnet).

Siberian rupy=red tourmaline.

Siberian topaz=very pale blue or bluish-white topaz. Siberite=violet-red tourmaline.

Siderite=sappharine (blue quartz). Mineralogically, a carbonate of iron.

Siliceous malachite=green chrysocolla.

Silicified wood=wood replaced by silica and small amounts of iron compounds. Sinople=quartz having red hematite inclusions.

Slave's diamond=colorless topaz.

Smaragdite=green variety of amphibole, like actinolite; also applied to other green stones, as the emerald, fuchsite, etc.

Smaragdus=smaragdite.

Smithsonite=carbonate of zinc. In England this carbonate of zinc is called calamine.

Smoky quartz=quartz crystals of a smoky or brown color.

Smoky topaz=true topaz of a smoky color; also more commonly smoky quartz. Sobrisky opal=opal from the Lead Pipe Spring district in the Death Valley region, Cal.

Sodalite=silicate of aluminum and sodium, with chlorine, generally blue.

Soldier's stone=amethyst.

Spanish emerald—emerald of the finest quality (presumably from South America).

Spanish lazulite=cordierite.

Spanish topaz=smoky quartz changed to yellow by heat.

Specular iron ore=hematite.

Spessartite=yellow, brown, or red garnet, silicate of aluminum and manganese.

Sphaerulite=variety of obsidian.

Sphalerite=sulphide of zinc.

Sphene=titanite.

Spinel=group of minerals composed of oxides of aluminum, iron, chromium, magnesium, or zinc. The name spinel is also applied to the species of this group which consists chiefly of aluminum and magnesium oxides.

Spinel ruby=red spinel.

Spinel sapphire=blue spinel.

Spodumene=silicate of aluminum and lithium.

St. Stephen stone=translucent chalcedony with round blood-red spots through it. Stalactite=carbonate of calcium in pendent masses deposited in caverns by evaporating water.

Stalagmite=carbonate of calcium deposited from evaporating water on the floors of caverns.

Star stone=starolite (quartz).

Star ruby=ruby (corundum) showing a star of light.

Star sapphire=grayish-blue sapphire (corundum) showing a star of light.

Star topaz=asteriated oriental topaz (yellow corundum).

Starolite=asteriated quartz.

Staurolite=hydrous silicate of aluminum, iron, and magnesium.

Steinheilite=cordierite.

Stibiotantalite=tantalate of antimony.

Succinite=amber; also amber-colored grossularite (garnet).

Sulphur diamond=pyrite.

Sun opal=fire opal.

Sunstone=feldspar (usually oligoclase or labradorite) containing inclusions of minute scales of iron oxide.

Swiss lapis=agate or jasper artificially colored blue. Synthetic gem=one artificially made from chemicals.

Syrian garnet=almandite (garnet) of a violet shade.

T.

Tabasheer=amorphous opal-like silica deposited in the joints of bamboo.

Tauridan topaz=very pale blue topaz.

Taxoite=serpentine from Chester County, Pa.

Test stone=basanite (jasper).

Texas agate=agate jasper from Texas.

Thetis hairstone=transparent quartz with inclusions of hairlike crystals of green actinolite.

Thomsonite=zeolite, hydrous silicate of aluminum, calcium, and sodium.

Thulite=rose-red zoisite.

Tiger-eye=yellow to brown, altered crocidolite.

Titanite=silicate of calcium and titanium.

Toad's-eye tin=concentric cassiterite. Same as wood tin but on a smaller scale. Topaz=silicate of aluminum, with fluorine. Most of the ordinary topaz of commerce is "false topaz" or yellow to brown quartz. Much of the "yellow quartz" is smoky quartz artificially changed from brown to yellow

by heat. The term topaz is also improperly applied to any yellow stone. Topaz cat's-eye=yellow corundum showing an elongated or round patch of opal-escent light.

Topazolite=colorless, yellowish, or greenish andradite (garnet).

Touchstone=basanite (jasper).

Tourmaline=group of closely related minerals which are complex hydroborosilicates of aluminum and one or more other bases, such as iron, manganese, calcium, magnesium, sodium, or lithium.

Trainite=impure banded variscite.

Tree agate=mocha stone.
Tree stone=mocha agate.

Trenton diamond=quartz crystal from Herkimer County, N. Y.

Trilobite=fossil.

Triphane=yellow or greenish-yellow spodumene.

Troostite=pink to gray willemite containing some manganese.

Turquoise=hydrous phosphate of aluminum and copper.

Turkis=turquoise.

Turtle back=chlorastrolite; also matrix turquoise; also matrix variscite.

TI.

Unripe diamond=quartz.

Ural chrysoberyl=alexandrite.

Uralian emerald=Siberian demantoid (green garnet).

Utahlite=compact variscite.

Uvarowite=green garnet containing chromium.

V

Vallum diamond=quartz crystals from the Tanjore district, Madras Presidency, India.

Variolite=darg-green orthoclase (feldspar) containing lighter-colored globular particles.

Variscite=hydrous green phosphate of aluminum.

Vegetable fossil=amber.

Verd antique=variegated serpentine; also clouded yellowish to bluish-green marble.

Verdite=green rock, composed chiefly of fuchsite (green muscovite containing chromium).

Verdolite=talcose-dolomitic breccia rock from New Jersey.

Vermeille=orange-red almandite (garnet); also orange-red spinel.

Vermilion opal=milky opal impregnated with cinnabar.

Vermilite=vermilion opal.

Vesuvian gem=vesuvianite.

Vesuvianite=complex silicate, chiefly of aluminum and calcium.

Vinegar spinel=yellowish-red spinel.

Violane=dark violet-blue diopside (pyroxene), from Piedmont, Italy.

Violet stone=cordierite.

Violite=compact purple chalcedony from San Diego County, Cal.

Volcanic chrysolite=vesuvianite.

Volcanic glass=obsidian.

Volcanic lava=lava.

Volcanic scoria=vesuvianite.

Vulpinite=anhydrite.

W.

Wabanite=banded cream to black and gray to purple chocolate-colored slate from Massachusetts.

Wardite=hydrous phosphate of aluminum.

Water agate=shell of chalcedony containing bubble of water.

Water chrysolite=moldavite.

Water opal=moonstone (feldspar).

Water sapphire=true water sapphire is cordierite; also white topaz.

Water stone=hydrolite (opal).

Wax agate=yellow agate, with a pronounced waxy luster.

Wax opal=yellow opal with a waxy luster.

Wernerite=scapolite.

White carnelian=cloudy, milk-white, or very pale reddish or yellowish chalcedony.

White emerald=cæsium beryl.

White jade=white nephrite; also compact white garnet; also white californite (vesuvianite).

White sapphire=colorless corundum; also quartz.

White topaz=colorless topaz; also quartz.

Willemite=silicate of zinc.

Williamsite=variety of serpentine of a rich blackish oil-green color. It may contain disseminated particles of black chromite, giving a mottled effect. Wiluite=green vesuvianite; also yellowish-green to greenish-white garnet.

Wilsonite=purplish-red scapolite. Wolf's eye=moonstone (feldspar).

Wolf's eye stone=crocidolite.

Wollastonite=silicate of calcium.

Wood agate=wood petrified or replaced by agate.

Wood opal=wood silicified by opal.

Wood stone=silicified wood.

Wood tin=cassiterite with a concentric structure.

World's eye=hydrophane (opal).

X.

Xanthite=dark yellowish-brown vesuvianite from Amity, N. Y.

Y.

Yogo sapphire=dark-blue corundum from Yogo Gulch, Mont. Yu stone=jade.

Z.

Zincite=oxide of zinc, mostly red.

Zircon=silicate of zirconium.

Zoisite=hydrous silicate of aluminum and calcium.

Zonite=variously colored chert or jasper, from Arizona.

Zonochlorite=banded prehnite, similar to chlorastrolite.

PART II.

Allanite.

Amphibole=actinolite, axstone, byssolite, crocidolite, hawk's-eye, hornblende, jade, kidney stone, nephrite, New Zealand greenstone, smaragdite, smaragdus, tremolite, wolf's-eye stone.

Anatase.

Andalusite=chiastolite, cross-stone, macle.

Anhydrite=vulpinite.

Ankerite=brown spar.

Apatite=moroxite, asparagus stone.

Apophyllite=fisheye stone, ichthyophthalmite.

Aragonite=alabaster, California onyx, flos ferri, flowers of iron, Gibraltar stone, iztac chalchihuitl, Mexican onyx, mosaic agate, oriental alabaster, oriental onyx, ruin aragonite, satin spar, stalactite, stalagmite, verd antique. (See also calcite.)

Azurite=blue malachite, chessy copper, chessylite.

Azurmalachite.

B.

Barite.

Benitoite.

Beryl=aeroides, amethiste basaltine, aquamarine, aquamarine chrysolite, bixbite, caesium beryl, canary beryl, chalchihuitl, chrysoberyllus, chrysolithus, davidsonite, emerald, golden beryl, goshenite, heliodor, hyacinthozontes, morganite, Peruvian emerald, Siberian aquamarine, smaragdite. Spanish emerald, white emerald.

Beryllonite.

Bone turquoise=fossil turquoise, new rock, occidental turquoise, odontolite. Brookite=arkansite.

C.

Calamine=Aztec stone, chalchihuitl, hemimorphite.

Calcite=agrite, calcomalachite, fire marble, İceland spar, lumachelle, marble, oolite, pisolite, satin spar.

Cancrinite.

Cassiterite=toad's-eye tin, wood tin.

Chondrodite.

Chromite=chromic iron.

Chrysoberyl=alexandrite, cat's-eye, Ceylon cat's-eye, chrysolite, cymophane, floating light, opalescent chrysolite, oriental cat's-eye, ural chrysoberyl.

Chrysocolla=keystonite, siliceous malachite. Clay=catlinite, pipestone, porcelain jasper.

Coal=anthracite, black amber, brown coal, candle coal, cannel coal, jet, lignite. Cobaltite.

Copper ore gem=carmazul, chrysocarmen, copper pitch ore, mahogany ore.

Cordierite=dichroite, iolite, lynx-stone, peliom, prismatic quartz, saphir d'eau, Spanish lazulite, steinheilite, violet stone, water sapphire.

Corundum=adamantine spar, asteria, asteriated topaz, Australian sapphire, Burma ruby, cat sapphire, Ceylon ruby, corundum cat's-eye, female sapphire, girasol, Kashmir sapphire, king topaz, leuco-sapphire, lynx sapphire, male sapphire, Montana sapphire, oriental, oriental amethyst, oriental aquamarine, oriental cat's-eye, oriental chrysoberyl, oriental chrysolite, oriental emerald, oriental signasol, oriental hyacinth, oriental moonstone, oriental peridot, oriental sapphire, oriental smrangd, oriental sunstone, oriental topaz, red stone, river sapphire, ruby, sapphire, star ruby, star sapphire, Siam, star topaz, topaz cat's-eye, white sapphire, Yogo sapphire.

D.

Danburite.

Datolite.

Diamond=Bahia, blue-white, brilliant, by-water, canary, cape, carbonado, first bye, first water, Golconda, jager, ripe-diamond.

Diaspore.

Dioptase=achirite, Congo emerald, copper emerald, emerald copper, emerald malachite, emerandine.

Dumortierite.

E.

Epidote=piedmontite, pistacite.

Euclase.

Euxenite.

F.

Feldspar=andularia, albite, albite moonstone, amazon stone, andesine, aventurine feldspar, bemiscite, bull's-eye, cassinite, Ceylon opal, changeant, chesterlite, delawarite, fisheye, girasol, heliolite, Labrador spar, Labrador stone, labradorite, leelite, lennilite, microcline, moonstone, oeil de boeuf, oligoclase, opaline feldspar, orthoclase, orthose, ox-eye, peristerite, perthite, sunstone, variolite, water opal, wolf's eye.

Fergusonite.

Fluorite=blue john, chlorophane, cobra stone, crimson night stone, false amethyst, false emerald, false ruby, false sapphire, false topaz, fluorspar. Fossil=beckite, beekite, fossil coral, Petoskey agate, petrified honeycomb,

trilobite.

Franklinite.

G.

Gadolinite.

Garnet=Adelaide ruby, almandite, American ruby, andradite, Arizona ruby, Arizona spinel, Bobrowska garnet, Bohemian diamond, Bohemian garnet, California ruby, Cape ruby, carbuncle, Ceylon hyacinth, Ceylon ruby, chloromelanite, chrome garnet, cinnamon stone, colophonite, Colorado ruby, demantoide, Elie ruby, essonite, false hyacinth, Fashoda garnet, gooseberry stone, grossularite, guarnaccino, hessonite, hyacinth, jacinth, jade, melanite, Montana ruby, olivine, oriental garnet, ouvarovite, pyrope, rhodolite, rock ruby, Rocky Mountain ruby, romansovite, roselite, rubinodi-rocca, schorlomite, Siberian chrysolite, spessartite succinite, Syrian garnet, topazolite, Uralian emerald, uvarovite, vermeille, white jade, wiluite.

Garnierite.

Goethite.

Gold.

Gypsum=alabaster, moonstone, ocean spray, satin spar, selenite.

H.

Haüynite.

Hematite=bloodstone, iron glance, specular iron ore.

Hetaerolite.

I.

Ilmenite=menaccanite.

Ilvaite.

K.

Kornerupine.

Kyanite=cyanite, disthene, sapparé.

L.

Lapis lazuli=Armenian stone, azure stone, blue rock, Oriental lapis, Persian lapis.

Lazulite=false lapis lazuli.

Lazurite.

Limonite=rattlebox.

M.

Magnetite=lodestone.

Malachite=pseudo-emerald.

Marcasite.

Mesolite.

Mica=agalmatolite, damourite, figure stone, fuchsite, image stone, lepidolite, maripesite, pagoda stone, pagodite, smaragdite, verdite.

Microlite.

Moldavite=bottle stone, false chrysolite, pseudo-chrysolite, water chrysolite. Monazite.

N.

Natrolite.

Nephelite.

0.

Obsidian=arrow points, black lava glass, glass agate, Iceland agate, Iceland agate lava, marekanite, mountain mahogany, Nevada diamond, pearlite, pearlylite, pitchstone, sphaerulite, volcanic glass.

Octahedrite=anatase.

Olivine=celestial precious stone, chrysolite, evening emerald, golden stone,

hyalosiderite, Job's-tears, peridot.

Opal=amber opal, black opal, cacholong opal, common opal, fire opal, flash opal, flash fire opal, fossil pineapple, girasol opal, gold opal, harlequin opal, hyalite, hydrophane, isopyre, jasper opal, lechosos opal, lithoxyle, magic stone, menilite, moss opal, mother-of-opal, Muller's glass, noble opal, opal agate, opal jasper, opal onyx, opaline, oriental opal, pealite, pin fire opal, pitch opal, prase opal, precious opal, quinzite, radio opal, resin opal, semiopal, Sobrisky opal, sun opal, tabasheer, vermilion opal, vermilite, water stone, wax opal, wood opal, world's eye.

P.

Parisite.

Pectolite=jade.

Phenacite.

Pitchblende=radiumite.

Polycrase.

Prehnite—Cape chrysolite, chlorastrolite, green agate, green star stone, greenstone, Isle Royal greenstone, Lake Superior greenstone, turtleback, zonochlorite. (See also thomsonite.)

Prosopite.

Pyrite=alpine diamond, fool's gold, Inca stone, Pennsylvania diamond, sulphur diamond.

Pyrophyllite=agalmatolite.
Pyroxene=alalite, bastite, bronzite, chalchihuitl (jadeite), diopside, enstatite, green garnet (enstatite), hyperstene, jade, jadeite, Labrador hornblende, malacolite, New Zealand greenstone, paulite, pink wollastonite, Schillerspar, violane, yu stone.

Quartz=agate, agate jasper, Alaska diamond, Alençon diamond, Aleppo stone, amberine, amethyst, amethystine quartz, Ancona ruby, apricotine, Arkansas diamond, arrow points, aventurine, azure quartz, Baffa diamond, basanite, beckite, beekite, bishop's stone, bloodstone, blood jasper, blue chrysoprase, blue moonstone, Bohemian diamond, Bohemian topaz, Bohemian ruby, Brazilian diamond, Brazilian pebble, Brazilian topaz, Briançon diamond, Bristol diamond, burnt amethyst, cacholong, cairngorm, California moonstone, Cape May diamond, carnelian, carnelian-onyx, catalinite, Catalina sardonyx, cat's-eye, cer-agate, chalchihuitl, chalcedony, chalcedony onyx, chalcedonyx, chert, chinarump, chloropal chrysoprase, Colorado topaz, Cornish diamond, cotterite, creolite, crispite, crystal, cupid's darts, Dauphine diamond, dendritic agate, Egyptian jasper, Egyptian pebble, eldoradoite, emeraldine, enhydros, eye agate, false diamond, false lapis, false topaz, fancy agate, feminine carnelian, flêches d'amour, Fleurus diamond, flint, flower stone, fortification agate, fossil coral, frost stone, geyserite, gold quartz, golden topaz, hairstone, heliotrope, Herkimer diamond, Horatio diamond, hornstone, hyacinth, Hungarian cat's-eye, hyacinth of Compostella, Imperial yu stone, Indian agate, Indian topaz, iolanthite, iridescent quartz, iris, Irish diamond, Isle of Wight diamond, jasp-agate, jasper, jasperine, kinradite, Lake George diamond, lavendine, love arrows, lydian stone, Madeira topaz, Marmorosch diamond, masculine carnelian, milky quartz, mocha stone, Mohave moonstone, Montana agate, Mont Blanc ruby, moonstone, Mora diamond, morion, moss agate, moss jasper, mother of emerald, myrickite, needlestone, nicolo, novaculite, occidental agate, occidental amethyst, occidental cat's-eye, occidental chalcedony, occidental diamond, occidental topaz, onegite, onyx, orange topaz, oriental agate, oriental chalcedony, oriental jasper, ouachita stone, Paphos diamond, pebble, Pecos diamond, petrified wood, plasma, prase, prismatic moonstone, pseudo diamond, Quebec diamond, rainbow agate, rainbow quartz, rhinestone, riband agate, riband jasper, ribbon agate, ring agate, river agate, rock crystal, rose quartz, rubasse. per, finboh agate, fing agate, fiver agate, fock trystal, fose quartz, rubasse, sagenite, sandy sard, sapphire quartz, sapphirine, sard, sardoine, sardonyx, Saxon topaz, Schaumburg diamond, Schiller quartz, Scotch topaz, semicarnelian, Siberian amethyst, siderite, sinople, silicified wood, smoky quartz, smoky topaz, soldier's stone, Spanish topaz, St. Stephen stone, star stone, starolite, Swiss lapis, test stone, Texas agate, Thetis hairstone, tigereye, topaz, touchstone, tree agate, tree stone, Trenton diamond, unripe diamond, Vallum, diamond, Vallum, hairstone, vialte, water agate, more diamond, vallum, diamond, Vallum, hairstone, vialte, water agate, more diamond, vallum, diamond, vallum, water agate, more diamond, vallum, diamond, vallum, water agate, more diamond, vallum, water agate, water agate, water agate, sand vallum, water agate, water agate, sand vallum, water agate, water agate, sand vallum, water agat mond, Vallum diamond, Venus hairstone, violite, water agate, wax agate, white carnelian, white sapphire, white topaz, wood agate, woodstone, zonite.

R.

Realgar.

Rhodochrosite.

Rhodonite=fowlerite.

Rock=agrite, catlinite, clay, creoline, graphic granite, lapis lazuli, lava, leopardite, matrix, mother-of-opal, novaculite, obsidian, pegmatite, pipestone, porcelain-jasper, porphyry, potstone, sausurite (jade), verdolite, volcanic lava, wabanite.

Rutile=money stone, nigrine.

S.

Samarskite. Sapphirine.

Scapolite=wernerite; wilsonite.

Sepiolite=meerschaum.

Serpentine=bowenite, California cat's-eye, California tiger-eye, jade, moriah stone, New Zealand greenstone, ophiolite, pelhamite, satelite, serpentine cat's eye, taxoite, verd antique, williamsite.

Sillimanite=jade.

Smithsonite=azulite, bonamite, sacred turquoise.

Sodalite.

Sphalerite.

Spinel=Alabandine ruby, almandine spinel, automolite, balas ruby, ceylonite, chlorospinel, chromite, dysluite, franklinite, gahnite, goutte de sang, hercynite, hyacinth, magnetite, pleonaste, rubicelle, ruby spinel, sapphirine, Siam ruby, spinel ruby, spinel sapphire, vermeille, vinegar spinel. Spodumene—California iris, hiddenite, kunzite, lithia emerald, triphane.

Staurolite=cross stone, fairy stone, lucky stone.

Stibiotantalite.

Thomsonite=comptonite, eye agate, eyestone, lintonite.

Titanite=sphene.

Topaz=aquamarine topaz, Brazilian aquamarine, Brazilian ruby, Brazilian sapphire, Brazilian topaz, burnt Brazilian topaz, burnt topaz, drop of water, golden topaz, goutte d'eau, Indian topaz, pink topaz, royal topaz, Saxon chrysolite, Saxon topaz, Schnecken topaz, Siberian topaz, slave's diamond, tauridian topaz, water sapphire.

Tourmaline=achroite, andalusite, aphrizite, Brazilian emerald, Brazilian peridot, Brazilian sapphire, Ceylon chrysolite, Ceylon peridot, dravite, emeralite, indicolite, peridot of Ceylon, precious schorl, rubellite schorl, Siberian

ruby, siberite.

Turquoise=celestial stone, chalchihuitl, chalchuite, edisonite, mineral turquoise, old rock stone, oriental turquoise, semiturquoise, turkis, turtleback.

Variscite—amatrice, callainite, chlorutahlite, sabalite, trainite, turtleback, utahlite.

Vesuvianite=American jade, brown jacinth, California jade, californite, cyprine, greenstone, idocrase, Italian chrysolite, jade, Oregon jade, Vesuvian gem, volcanic chrysolite, volcanic scoria, white jade, xanthite.

Wardite. Willemite=troostite. Wollastonite.

Z.

Zircon=Ceylonese zircon, hyacinth, jacinth, jargon, jargoon, matara diamond. Zoisite=rosaline, thulite.



